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NEWS 13	FEB 06	Patent sequence location (PSL) data added to USGENE
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FULL ESTIMATED COST	0.22	0.22

FILE 'MEDLINE' ENTERED AT 13:57:34 ON 04 MAR 2009

FILE 'EMBASE' ENTERED AT 13:57:34 ON 04 MAR 2009

FILE 'BIOSIS' ENTERED AT 13:57:34 ON 04 MAR 2009

FILE 'CAPLUS' ENTERED AT 13:57:34 ON 04 MAR 2009

=> s (FSH or follicle(w)stimulating(w)hormone)
L1 139482 (FSH OR FOLLICLE(W) STIMULATING(W) HORMONE)

=> s l1 and (metal(w)ion(w)chromatography)
L2 1 L1 AND (METAL(W) ION(W) CHROMATOGRAPHY)

=> s l1 and (metal(w)ion)
L3 37 L1 AND (METAL(W) ION)

=> s l3 and borate
L4 1 L3 AND BORATE

=> dis ibib abs l4

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:612336 CAPLUS
DOCUMENT NUMBER: 143:131925
TITLE: Method for purifying FSH using chromatography
INVENTOR(S): Rossi, Mara
PATENT ASSIGNEE(S): Ares Trading S. A., Switz.
SOURCE: PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005063811	A1	20050714	WO 2004-EP14347	20041216

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,

GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
MR, NE, SN, TD, TG

AU 2004309040	A1	20050714	AU 2004-309040		20041216
CA 2544333	A1	20050714	CA 2004-2544333		20041216
EP 1697412	A1	20060906	EP 2004-803960		20041216
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU					
CN 1890265	A	20070103	CN 2004-80036591		20041216
BR 2004017992	A	20070427	BR 2004-17992		20041216
JP 2008500273	T	20080110	JP 2006-546007		20041216
MX 2006005584	A	20060725	MX 2006-5584		20060517
KR 2006135656	A	20061229	KR 2006-711610		20060613
US 20070129295	A1	20070607	US 2007-581172		20070206
PRIORITY APPLN. INFO.:			EP 2003-104925	A	20031222
			WO 2004-EP14347	W	20041216

AB The invention provides a method for purifying recombinant human FSH or an FSH variant, comprising the steps: (1) ion exchange chromatog.; (2) immobilized metal ion chromatog.; (3) hydrophobic interaction chromatog. which may be carried out in any order.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> dup rem l3
PROCESSING COMPLETED FOR L3
L5 17 DUP REM L3 (20 DUPLICATES REMOVED)

=> dis ibib abs l3 1-17

L3 ANSWER 1 OF 37 MEDLINE on STN
ACCESSION NUMBER: 1997372215 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9228455
TITLE: Isolation and partial characterization of LH, FSH and TSH from canine pituitary gland.
AUTHOR: Chiba K; Kobayashi H; Wakabayashi K
CORPORATE SOURCE: Biosignal Research Center, Gunma University, Japan.
SOURCE: Endocrine journal, (1997 Apr) Vol. 44, No. 2, pp. 205-18. Journal code: 9313485. ISSN: 0918-8959.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199708
ENTRY DATE: Entered STN: 2 Sep 1997
Last Updated on STN: 2 Sep 1997
Entered Medline: 18 Aug 1997

AB A new preparative procedure without using ion-exchanger is described for the efficient purification of canine LH (cLH), FSH (cFSH) and TSH (cTSH) from the pituitary gland. The hormones were extracted from the pituitary homogenate with an ammonium sulfate solution, and were separated by Concanavalin (Con) A affinity-, hydrophobic interaction-, then immobilized metal ion affinity chromatography. In the immobilized metal ion affinity chromatography, we used

copper (Cu2+) as chelated metal ion with ammonium ion gradient and pH gradient in phosphate buffer to attain separation of the hormones. High purity of cLH, cFSH and cTSH was indicated as single bands in SDS-PAGE, with apparent molecular masses of 34, 36 and 37 kDA, respectively. The purified hormones showed two bands corresponding to alpha (20 kDa) and beta subunits (cLH beta: 16 kDa, cFSH beta: 22 kDa, cTSH beta: 16 kDa) under reducing condition in SDS-PAGE. The purified hormones were prepared in good recovery (LH: 53%, FSH: 34%, TSH: 36%) with high biological activity or binding activity to the receptor. Cross-contamination of the purified hormone was less than 0.5%. Examination of the hormone fraction with isoelectric focusing showed that major peaks of isoelectric isoforms were maintained throughout the purification steps of cLH and cFSH, while a few peaks were lost in Con A affinity chromatography in cTSH purification. It was concluded that the present method could prepare highly purified cLH, cFSH and cTSH which retained isoforms of the hormones and biological activity or binding affinity to the receptor.

L3 ANSWER 2 OF 37 MEDLINE on STN
ACCESSION NUMBER: 1992407540 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1527528
TITLE: Increased LH and FSH release from the anterior pituitary of ovariectomized rat, in vivo, by copper-, nickel-, and zinc-LHRH complexes.
AUTHOR: Kochman K; Gajewska A; Kozlowski H; Masiukiewicz E; Rzeszotarska B
CORPORATE SOURCE: Institute of Animal Physiology and Nutrition, Polish Academy of Sciences, Jablonna.
SOURCE: Journal of inorganic biochemistry, (1992 Oct 1) Vol. 48, No. 1, pp. 41-6.
Journal code: 7905788. ISSN: 0162-0134.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199210
ENTRY DATE: Entered STN: 6 Nov 1992
Last Updated on STN: 3 Feb 1997
Entered Medline: 22 Oct 1992
AB The effect of Cu2+, Ni2+, Zn2+ and their complexes with LHRH on the release of luteinizing hormone (LH) and follicle stimulating hormone (FSH) was estimated in in vivo experiments with the use of the method proposed by Ramirez and McCann. Ovariectomized, estradiol, and progesterone pretreated rats were injected intravenously either with LHRH alone, a metal ion alone, a mixture of metal and hormone, or a metal-LHRH complex. A metal alone or a mixture of it with LHRH did not affect gonadotropin release at all or no more than LHRH alone. However, the complex of Cu2+ with LHRH brought about a high release of LH and even higher release of FSH. This indicates that copper complex is more effective than metal-free LHRH. The nickel complex showed a similar although lesser effect. The zinc complex had similar potency to free LHRH though higher FSH-releasing ability was noticed. We conclude that copper-, nickel-, and zinc-LHRH complexes were more potent than the peptide hormone itself and promoted the FSH release in the ovariectomized, estradiol, and progesterone pretreated rats.

L3 ANSWER 3 OF 37 MEDLINE on STN
ACCESSION NUMBER: 1991152195 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2127232
TITLE: Secreted metalloproteinases in testicular cell culture.

AUTHOR: Sang Q X; Dym M; Byers S W
CORPORATE SOURCE: Department of Anatomy and Cell Biology, Georgetown University Medical Center, Washington, District of Columbia 20007.
CONTRACT NUMBER: HD 16260 (United States NICHD NIH HHS)
HD 23744 (United States NICHD NIH HHS)
SOURCE: Biology of reproduction, (1990 Dec) Vol. 43, No. 6, pp. 946-55.
Journal code: 0207224. ISSN: 0006-3363.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199104
ENTRY DATE: Entered STN: 28 Apr 1991
Last Updated on STN: 3 Mar 2000
Entered Medline: 11 Apr 1991

AB It is well known that cultured Sertoli cells secrete plasminogen activators (Lacroix et al., Mol Cell Endocrinol 1977; 9:227-236; Hettle et al., Biol Reprod 1986; 34:895-904). We now show that testicular cells in culture also secrete gelatinolytic metalloproteinases. Gelatin zymographic analysis of concentrated culture medium proteins reveals that Sertoli cells secrete gelatinases of 185 kDa, 110 kDa, 83 kDa, 76 kDa, and 72 kDa in addition to plasminogen activators (PAs). Gelatinase 185 kDa is induced by FSH. Media from Sertoli (epithelial)/peritubular (mesenchymal) cell cocultures contain the Sertoli cell gelatinases and one FSH-stimulated gelatinase of 50 kDa, indicating that gelatinase 50 kDa is regulated by both FSH and cell-cell interactions. A 50-kDa fibronectinolytic activity is also present in the coculture medium from cells grown in the presence of FSH. Casein zymography demonstrates a prominent 30-kDa protease only in media from cocultures. Peritubular cells secrete urokinase-type plasminogen activator (u-PA) and exhibit slight degrading activity at 86 kDa and 74 kDa. The gelatinases are most active in the pH range 7.3-8.5 and are completely or partially inhibited by metal ion chelators indicating that they are metalloproteinases. Our data demonstrate that testicular cells in culture secrete several gelatinases in addition to PAs, and that FSH and coculture conditions regulate some of these secreted proteases. We suggest that the highly regulated secretion of these proteases may well be of physiological importance during testicular development and spermatogenesis.

L3 ANSWER 4 OF 37 MEDLINE on STN
ACCESSION NUMBER: 1987224696 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3108440
TITLE: Specific binding sites for LH/chorionic gonadotrophin, low-density lipoprotein, prolactin and FSH in homogenates of human corpus luteum. I: Validation of methods.
AUTHOR: Bramley T A; Stirling D; Swanston I A; Menzies G S; Baird D T
SOURCE: The Journal of endocrinology, (1987 May) Vol. 113, No. 2, pp. 305-15.
Journal code: 0375363. ISSN: 0022-0795.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198707

ENTRY DATE: Entered STN: 5 Mar 1990
Last Updated on STN: 5 Mar 1990
Entered Medline: 20 Jul 1987

AB The specific binding of 125I-labelled human chorionic gonadotrophin (hCG), human low-density lipoprotein (hLDL), human FSH (hFSH) and human prolactin (hPRL) to homogenates of human corpus luteum tissue was measured. Specific binding of 125I-labelled hCG was dependent on the temperature and duration of incubation, was inhibited by divalent metal ions or chelating agents, and increased linearly with homogenate concentration. Recovery of bound hormone was more effective using Millipore filtration or polyethylene glycol precipitation compared with centrifugation alone. Binding of 125I-labelled hCG was inhibited specifically by low levels of hCG and human LH (hLH) but not by ovine LH or bovine LH. Incubation of human luteal tissue with ice-cold citrate buffer (pH 3) released more than 90% of specifically bound 125I-labelled hCG within 5 min. This treatment inactivated LH receptors, but did not affect the immunoactivity of hLH released, enabling the measurement of released hormone by radioimmunoassay. Scatchard plots of binding of 125I-labelled LDL to human corpus luteum demonstrated a single class of binding sites. Binding was saturable, increased linearly with increasing concentration of homogenate, and was displaceable by low concentrations of unlabelled LDL. Binding of 125I-labelled hPRL to human luteal homogenates was increased by Mg2+ and was specific for lactogenic hormones (human prolactin, human growth hormone and ovine prolactin). Binding of 125I-labelled hFSH was not dependent on divalent metal ion concentration (in marked contrast to hFSH binding to immature pig granulosa cell receptors) and was displaced by hFSH preparations but not by hPRL, ovine LH or hCG at 1 microgram/ml. These results establish optimal conditions and hormone specificities for the measurement of human luteal gonadotrophin and LDL receptors, and methods for the estimation of hLH/hCG endogenously bound to human corpus luteum tissue.

L3 ANSWER 5 OF 37 MEDLINE on STN
ACCESSION NUMBER: 1987004363 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3093204
TITLE: Rat ovarian and adrenal prolactin receptors. Sizes and effects of divalent metal ions.
AUTHOR: Ohta S; Wakabayashi K
SOURCE: Endocrinologia japonica, (1986 Apr) Vol. 33, No. 2, pp. 239-49.
Journal code: 0376546. ISSN: 0013-7219.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198611
ENTRY DATE: Entered STN: 2 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 14 Nov 1986

AB Receptor fractions were prepared from follicle-rich ovaries (for FSH), luteal cell-rich ovaries (for LH and PRL), and adrenals (for PRL) of rats. Divalent metal ions, Mg++, Ca++, and Mn++ showed inhibitory effects on the binding of LH and FSH to their receptors. The binding of the former was more sensitive to these ions than the latter. On the other hand they showed bell-shaped promotive effects on PRL-ovarian receptor binding, the maximal effects being observed at 10-20 mM. Besides these ions, Ba++ also had a promotive effect, while other divalent metal ions such as Zn++, Cd++, Ni++, and Co++ showed inhibitory effects on PRL-ovarian receptor binding at 5 mM. Mg++ and Ca++ also promoted PRL-adrenal receptor binding, while Mn++ promoted the binding at 10 mM but inhibited it at higher concentrations. Association constant (Ka) and binding capacity

(Bmax) of PRL receptors of the ovary and the adrenal were significantly different (ovary: Ka = 0.69 X 10(10) M-1, Bmax = 62 fmol/mg protein, adrenal: Ka = 0.21 X 10(10) M-1, Bmax = 99 fmol/mg protein). Ka of the ovarian PRL receptor was not influenced by these divalent ions, while that of the adrenal receptor was doubled by Ca and Mn ions, Bmax of the latter was also increased. A cooperative effect of Mg and Ca ions was observed on Ka and Bmax of the adrenal receptor. The sizes of the PRL binding sites of these organs revealed by affinity labelling were 17K and 40K in the ovary, and 40K and 110K in the adrenal. These results indicate the different properties of receptors in these different target organs.

L3 ANSWER 6 OF 37 EMBASE

ACCESSION NUMBER: 1997163463 EMBASE

TITLE: Isolation and partial characterization of LH, FSH and TSH from canine pituitary gland.

AUTHOR: Chiba, Koji; Kobayashi, Hisae; Wakabayashi, Katsumi, Dr. (correspondence)

CORPORATE SOURCE: Biosignal Research Center, Inst. for Molec. and Cell. Reg., Gunma University, Gunma 371, Japan.

AUTHOR: Chiba, Koji

CORPORATE SOURCE: Pharmacia Upjohn Tsukuba Res. Labs., Ibaraki 300-42, Japan.

AUTHOR: Wakabayashi, Katsumi, Dr. (correspondence)

CORPORATE SOURCE: Biosignal Research Center, Inst. for Molec. and Cell. Reg., Gunma University, 3-39-15 Showamachi, Maebashi, Gunma 371, Japan.

AUTHOR: Wakabayashi, Katsumi, Dr. (correspondence)

CORPORATE SOURCE: Biosignal Research Center, Inst. for Molec./Cellular Regulation, Gunma University, 3-39-15 Showa-machi, Maebashi, Gunma 371, Japan.

SOURCE: Endocrine Journal, (Apr 1997) Vol. 44, No. 2, pp. 205-218. Refs: 42
ISSN: 0918-8959 CODEN: ENJOEO

COUNTRY: Japan

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 003 Endocrinology

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 18 Jun 1997
Last Updated on STN: 18 Jun 1997

AB A new preparative procedure without using ion-exchanger is described for the efficient purification of canine LH (cLH), FSH (cFSH) and TSH (cTSH) from the pituitary gland. The hormones were extracted from the pituitary homogenate with an ammonium sulfate solution, and were separated by Concanavalin (Con) A affinity-, hydrophobic interaction-, then immobilized metal ion affinity chromatography. In the immobilized metal ion affinity chromatography, we used copper (Cu(2+)) as chelated metal ion with ammonium ion gradient and pH gradient in phosphate buffer to attain separation of the hormones. High purity of cLH, cFSH and cTSH was indicated as single bands in SDS-PAGE, with apparent molecular masses of 34, 36 and 37 kDa, respectively. The purified hormones showed two bands corresponding to α (20 kDa) and β subunits (cLHβ: 16 kDa, cFSHβ: 22 kDa, cTSHβ: 16 kDa) under reducing condition in SDS-PAGE. The purified hormones were prepared in good recovery (LH: 53%, FSH: 34%, TSH: 36%) with high biological activity or binding activity to the receptor. Cross-contamination of the purified hormone was less than 0.5%. Examination of the hormone fraction with isoelectric focusing showed that major peaks of isoelectric isoforms were maintained throughout the purification steps of cLH and cFSH, while a few peaks were lost in Con A affinity chromatography in cTSH purification. It was concluded that the present method could prepare highly purified cLH, cFSH and cTSH which

retained isoforms of the hormones and biological activity or binding affinity to the receptor.

L3 ANSWER 7 OF 37 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 1993051113 EMBASE
TITLE: [Influence of zinc concentration on the constitution and some properties of folitropine suspensions]. EINFLUSS DER ZINKIONENKONZENTRATION AUF BILDUNG UND EINIGE EIGENSCHAFTEN VON FOLITROPIN-SUSPENSIONEN.
AUTHOR: Ryszka, F. (correspondence); Dolinska, B.; Smorag, Z.
CORPORATE SOURCE: Department of Applied Pharmacy and, Drug Technology, Katowice, Poland.
SOURCE: Pharmazie, (1993) Vol. 48, No. 1, pp. 46-47.
ISSN: 0031-7144 CODEN: PHARAT
COUNTRY: Germany
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 037 Drug Literature Index
LANGUAGE: German
SUMMARY LANGUAGE: English; German
ENTRY DATE: Entered STN: 14 Mar 1993
Last Updated on STN: 14 Mar 1993
AB The influence of zinc concentration on the constitution of folitropine (FSH)-zinc complexes is studied. The complexes are small soluble within the molar ratio hormone: metal ion between 1:10 and 1:100. The suspensions received are characterised by sedimentation time, redispersion time, particle diameter and the amount of free and bound FSH. The liberation of FSH in vitro is delayed and the effect on the ovulation at rabbits is stronger as the effect of unbound FSH in control experiments.

L3 ANSWER 8 OF 37 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 1992285758 EMBASE
TITLE: Increased LH and FSH release from the anterior pituitary of ovariectomized rat, in vivo, by copper-, nickel-, and zinc-LHRH complexes.
AUTHOR: Kochman, K., Prof. (correspondence); Gajewska, A.; Kozlowski, H.; Masiukiewicz, E.; Rzeszotarska, B.
CORPORATE SOURCE: Inst. of Animal Physiology/Nutrition, Polish Academy of Sciences, 05-110 Jablonna near Warsaw, Poland.
SOURCE: Journal of Inorganic Biochemistry, (1992) Vol. 48, No. 1, pp. 41-46.
ISSN: 0162-0134 CODEN: JIBIDJ
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical and Experimental Biochemistry
003 Endocrinology
030 Clinical and Experimental Pharmacology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 25 Oct 1992
Last Updated on STN: 25 Oct 1992

L3 ANSWER 9 OF 37 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 1991027841 EMBASE
TITLE: Secreted metalloproteinases in testicular cell culture.
AUTHOR: Qing-Xiang Sang; Dym, M.; Byers, S.W. (correspondence)
CORPORATE SOURCE: Dept. of Anatomy/Cell Biology, Georgetown University, Medical Center, 3900 Reservoir Rd., Washington, DC 20007,

United States.
SOURCE: Biology of Reproduction, (1990) Vol. 43, No. 6, pp. 946-955.
ISSN: 0006-3363 CODEN: BIREBV
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 002 Physiology
021 Developmental Biology and Teratology
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 16 Dec 1991
Last Updated on STN: 16 Dec 1991

AB It is well known that cultured Sertoli cells secrete plasminogen activators (Lacroix et al., Mol Cell Endocrinol 1977; 9:227-236; Hettle et al., Biol Reprod 1986; 34:895-904). We now show that testicular cells in culture also secrete gelatinolytic metalloproteinases. Gelatin zymographic analysis of concentrated culture medium proteins reveals that Sertoli cells secrete gelatinases of 185 kDa, 110 kDa, 83 kDa, 76 kDa, and 72 kDa in addition to plasminogen activators (PAs). Gelatinase 185 kDa is induced by FSH. Media from Sertoli (epithelial)/peritubular (mesenchymal) cell cocultures contain the Sertoli cell gelatinases and one FSH-stimulated gelatinase of 50 kDa, indicating that gelatinase 50 kDa is regulated by both FSH and cell-cell interactions. A 50-kDa fibronectinolytic activity is also present in the coculture medium from cells grown in the presence of FSH. Casein zymography demonstrates a prominent 30-kDa protease only in media from cocultures. Peritubular cells secrete urokinase-type plasminogen activator (u-PA) and exhibit slight degrading activity at 86 kDa and 74 kDa. The gelatinases are most active in the pH range 7.3-8.5 and are completely or partially inhibited by metal ion chelators indicating that they are metalloproteinases. Our data demonstrate that testicular cells in culture secrete several gelatinases in addition to PAs, and that FSH and coculture conditions regulate some of these secreted proteases. We suggest that the highly regulated secretion of these proteases may well be of physiological importance during testicular development and spermatogenesis.

L3 ANSWER 10 OF 37 EMBASE
ACCESSION NUMBER: 1987139114 EMBASE
TITLE: Specific binding sites for LH/chorionic gonadotrophin, low-density lipoprotein, prolactin and FSH in homogenates of human corpus luteum. I: Validation of methods.
AUTHOR: Bramley, T.A.; Stirling, D.; Swanston, I.A.; et. al.
CORPORATE SOURCE: Department of Obstetrics and Gynaecology, Centre for Reproductive Biology, Edinburgh EH3 9EW, United Kingdom.
SOURCE: Journal of Endocrinology, (1987) Vol. 113, No. 2, pp. 305-315.
ISSN: 0022-0795 CODEN: JOENAK
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 010 Obstetrics and Gynecology
003 Endocrinology
LANGUAGE: English
ENTRY DATE: Entered STN: 11 Dec 1991
Last Updated on STN: 11 Dec 1991

AB The specific binding of (125)I-labelled human chorionic gonadotrophin (hCG), human low-density lipoprotein (hLDL), human FSH (hFSH) and human prolactin (hPRL) to homogenates of human corpus luteum tissue was measured. Specific binding of (125)I-labelled hCG was dependent on the temperature and duration of incubation, was inhibited by divalent

metal ions or chelating agents, and increased linearly with homogenate concentration. Recovery of bound hormone was more effective using Millipore filtration or polyethylene glycol precipitation compared with centrifugation alone. Binding of (125)I-labelled hCG was inhibited specifically by low levels of hCG and human LH (hLH) but not by ovine LH or bovine LH. Incubation of human luteal tissue with ice-cold citrate buffer (pH 3) released more than 90% of specifically bound (125)I-labelled hCG within 5 min. This treatment inactivated LH receptors, but did not affect the immunoactivity of hLH released, enabling the measurement of released hormone by radioimmunoassay. Scatchard plots of binding of (125)I-labelled LDL to human corpus luteum demonstrated a single class of binding sites. Binding was saturable, increased linearly with increasing concentration of homogenate, and was displaceable by low concentrations of unlabelled LDL. Binding of (125)I-labelled hPRL to human luteal homogenates was increased by Mg(2+) and was specific for lactogenic hormones (human prolactin, human growth hormone and ovine prolactin). Binding of (125)I-labelled hFSH was not dependent on divalent metal ion concentration (in marked contrast to hFSH binding to immature pig granulosa cell receptors) and was displaced by hFSH preparations but not by hPRL, oving LH or hCG at 1 μg/ml. These results establish optimal conditions and hormone specificities for the measurement of human luteal gonadotrophin and LDL receptors, and methods for the estimation of hLH/hCG endogenously bound to human corpus luteum tissue.

L3 ANSWER 11 OF 37 EMBASE

ACCESSION NUMBER: 1987137446 EMBASE
TITLE: Rat ovarian and adrenal prolactin receptors. Sizes and effects of divalent metal ions.
AUTHOR: Ohta, S.; Wakabayashi, K.
CORPORATE SOURCE: Hormone Assay Center, Institute of Endocrinology, Gunma University, Maebashi 371, Japan.
SOURCE: Endocrinologia Japonica, (1986) Vol. 33, No. 2, pp. 239-249.
ISSN: 0013-7219 CODEN: ECJPAE
COUNTRY: Japan
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 003 Endocrinology
LANGUAGE: English
ENTRY DATE: Entered STN: 11 Dec 1991
Last Updated on STN: 11 Dec 1991

AB Receptor fractions were prepared from follicle-rich ovaries (for FSH), luteal cell-rich ovaries (for LH and PRL), and adrenals (for PRL) of rats. Divalent metal ions, Mg(++), Ca(++), and Mn(++) showed inhibitory effects on the bindings of LH and FSH to their receptors. The binding of the former was more sensitive to these ions than the latter. On the other hand they showed bell-shaped promotive effects on PRL-ovarian receptor binding, the maximal effects being observed at 10-20 mM. Besides these ions, Ba(++) also had a promotive effect, while other divalent metal ions such as Zn(++), Cd(++), Ni(++), and Co(++) showed inhibitory effects on PRL-ovarian receptor binding at 5 mM. Mg(++) and Ca(++) also promoted PRL-adrenal receptor binding, while Mn(++) promoted the binding at 10 mM but inhibited it at higher concentrations. Association constant (Ka) and binding capacity (Bmax) of PRL receptors of the ovary and the adrenal were significantly different (ovary: Ka = 0.69 x 10(10) M(-1), Bmax = 62 fmol/mg protein, adrenal: Ka = 0.21 x 10(10) M(-1), Bmax = 99 fmol/mg protein). The Ka of the ovarian PRL receptor was not influenced by these divalent ions, while that of the adrenal receptor was doubled by Ca and Mn ions. The Bmax of the latter was also increased. A cooperative effect of Mg and Ca ions was observed on the Ka and Bmax of the adrenal receptor.

The sizes of the PRL binding sites of these organs revealed by affinity labelling were 17K and 40K in the ovary, and 40K and 110K in the adrenal. These results indicate the different properties of receptors in these different target organs.

L3 ANSWER 12 OF 37 EMBASE

ACCESSION NUMBER: 1983037238 EMBASE
TITLE: Follitropin binding to receptors in testis. Modulation by monovalent salts and divalent cations.
AUTHOR: Andersen, T.T.; Reichert Jr., L.E.
CORPORATE SOURCE: Dep. Biochem., Albany Med. Coll., Union Univ., Albany, NY 12208, United States.
SOURCE: Journal of Biological Chemistry, (1982) Vol. 257, No. 19, pp. 11551-11557.
ISSN: 0021-9258 CODEN: JBCHA3
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 028 Urology and Nephrology
029 Clinical and Experimental Biochemistry
003 Endocrinology
030 Clinical and Experimental Pharmacology
037 Drug Literature Index
LANGUAGE: English
ENTRY DATE: Entered STN: 9 Dec 1991
Last Updated on STN: 9 Dec 1991
AB The effects of monovalent salts and divalents metal ions on the interactions of radioiodinated human follitropin ((125)I-hFSH) with membrane-bound, detergent-solubilized, or buffer-soluble receptors from calf testis were studied. Binding of (125)I-hFSH to the membrane-bound receptor was stimulated 2- to 3-fold by Mn(2+), Mg(2+), or Ca(2+) (each at 2-5 mM), but was inhibited by Co(2+) or Ni(2+). Neither of these ions was capable of causing dissociation of preformed hormone receptor complexes. Addition of 10 mM EDTA resulted in a rapid, reversible dissociation of (125)I-hFSH from each class of the receptor. Binding of FSH to detergent-solubilized or buffer-soluble receptor in the absence of divalent ions was negligible and was maximal at approximately 5 mM Mn(2+), or Ca(2+), with a midpoint of 0.8 mM. Various monovalent salts either inhibited or stimulated specific binding of FSH to the three classes of receptor. Inhibition of halides increased with ionic radius, in the order F(-)<Cl(-)<I(-). Among the alkali ions, Na(+) was more inhibitory than Li(+) or K(+) at 0.1 M. Acetate (0.1 M) was noninhibitory, while NO(3)(-) or HCO(3)(-) was a potent inhibitor. Stimulation of (125)I-hFSH binding was seen at 0.1 M NH(4)(+) ion. The effects of the various monovalent salts were primarily on receptor affinity, with the rate of dissociation being affected more than the rate of association. These effects, which are discussed in terms of their relationship to the B coefficient of viscosity, were reversible and nonspecific binding was largely unaffected. The similarity of effects of these salts or cations on the interaction of FSH with receptors in testis membranes, after detergent solubilization, and with FSH binding components soluble in the absence of detergent support the notion that the latter preparations are suitable models for the study of the receptor once removed from its membrane. The results also indicate that a detailed understanding of the effects of common inorganic ions on the interaction of FSH with receptor is essential to proper evaluation of in vitro binding studies.

L3 ANSWER 13 OF 37 EMBASE

ACCESSION NUMBER: 1981238087 EMBASE
TITLE: Changes in FSH and LH secretion in the ferret

associated with the induction of ovulation by copper acetate.
AUTHOR: Donovan, B.T.; Gledhill, B.
CORPORATE SOURCE: Dept. Physiol., Inst. Psychiat., London SE5 8AF, United Kingdom.
SOURCE: Biology of Reproduction, (1981) Vol. 25, No. 1, pp. 72-76. ISSN: 0006-3363 CODEN: BIREBV
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 010 Obstetrics and Gynecology
023 Nuclear Medicine
003 Endocrinology
037 Drug Literature Index
LANGUAGE: English
ENTRY DATE: Entered STN: 9 Dec 1991
Last Updated on STN: 9 Dec 1991
AB The changes in FSH and LH secretion associated with the induction of ovulation by i.v. injection of 5 mg copper acetate were followed in the ferret and found to be influenced by barbiturate anesthesia. In anesthetized estrous animals, the metal ion produced a small initial increase in plasma LH concentration which was followed by a gradual but sustained rise. Anestrous animals responded with a large initial surge of LH release which declined to a plateau some 4 times higher than the basal level and was maintained for at least 6 h. Compared with the anesthetized animals, treatment of conscious estrous ferrets with copper acetate caused an abrupt and much greater initial increase in plasma LH concentration, while in conscious anestrous ferrets the initial surge in plasma LH content was significantly greater than seen under anesthesia, but was followed by a steady decline toward control values. The changes in plasma FSH concentration produced by copper acetate were somewhat similar to those for LH, but were less pronounced.

L3 ANSWER 14 OF 37 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
ACCESSION NUMBER: 1998:300835 BIOSIS
DOCUMENT NUMBER: PREV199800300835
TITLE: Isolation and partial characterization of LH, FSH and TSH from canine pituitary gland.
AUTHOR(S): Chiba, Koji; Kobayashi, Hisae; Wakabayashi, Katsumi [Reprint author]
CORPORATE SOURCE: Biosignal Res. Cent., Inst. Mol. Cell. Regulation, Gunma Univ., 3-39-15 Showa-machi, Maebashi, Gunma 371, Japan
SOURCE: Endocrine Journal, (April, 1997) Vol. 44, No. 2, pp. 205-218. print.
ISSN: 0918-8959.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 15 Jul 1998
Last Updated on STN: 15 Jul 1998
AB A new preparative procedure without using ion-exchanger is described for the efficient purification of canine LH (cLH), FSH (cFSH) and TSH (cTSH) from the pituitary gland. The hormones were extracted from the pituitary homogenate with an ammonium sulfate solution, and were separated by Concanavalin (Con) A affinity-, hydrophobic interaction-, then immobilized metal ion affinity chromatography. In the immobilized metal ion affinity chromatography, we used copper (Cu2+) as chelated metal ion with ammonium ion gradient and pH gradient in phosphate buffer to attain separation of the hormones. High purity of cLH, cFSH and cTSH was indicated as single bands in SDS-PAGE, with apparent molecular masses of 34, 36 and 37 kDa, respectively. The purified hormones showed two bands corresponding to a

(20 kDa) and beta subunits (cLHbeta: 16 kDa, cFSHbeta: 22 kDa, cTSHbeta: 16 kDa) under reducing condition in SDS-PAGE. The purified hormones were prepared in good recovery (LH: 53%, FSH: 34%, TSH: 36%) with high biological activity or binding activity to the receptor. Cross-contamination of the purified hormone was less than 0.5%. Examination of the hormone fraction with isoelectric focusing showed that major peaks of isoelectric isoforms were maintained throughout the purification steps of cLH and cFSH, while a few peaks were lost in Con A affinity chromatography in cTSH purification. It was concluded that the present method could prepare highly purified cLH, cFSH and cTSH which retained isoforms of the hormones and biological activity or binding affinity to the receptor.

L3 ANSWER 15 OF 37 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
ACCESSION NUMBER: 1992:475363 BIOSIS
DOCUMENT NUMBER: PREV199294106738; BA94:106738
TITLE: INCREASED LH AND FSH RELEASE FROM THE ANTERIOR PITUITARY OF OVARIECTOMIZED RAT IN-VIVO BY COPPER NICKEL AND ZINC LHRH COMPLEXES.
AUTHOR(S): KOCHMAN K [Reprint author]; GAJEWSKA A; KOZLOWSKI H; MASIUKIEWICZ E; RZESZOTARSKA B
CORPORATE SOURCE: INST ANIMAL PHYSIOLOGY NUTRITION, POLISH ACADEMY SCI, 05-110, JABLONNA NEAR WARSAW, POLAND
SOURCE: Journal of Inorganic Biochemistry, (1992) Vol. 48, No. 1, pp. 41-46.
CODEN: JIBIDJ. ISSN: 0162-0134.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 27 Oct 1992
Last Updated on STN: 13 Dec 1992
AB The effect of Cu2+, Ni2+, Zn2+ and their complexes with LHRH on the release of luteinizing hormone (LH) and follicle stimulating hormone (FSH) was estimated in in vivo experiments with the use of the method proposed by Ramirez and McCann. Ovariectomized, estradiol, and progesterone pretreated rats were injected intravenously either with LHRH alone, a metal ion alone, a mixture of metal and hormone, or a metal-LHRH complex. A metal alone of a mixture of it with LHRH did not affect gonadotropin release at all or no more than LHRH alone. However, the complex of Cu2+ with LHRH brought about a high release of LH and even higher release of FSH. This indicates that copper complex is more effective than metal-free LHRH. The nickel complex showed a similar although lesser effect. The zinc complex had similar potency to free LHRH though higher FSH-releasing ability was noticed. We conclude that copper-, nickel-, and zinc-LHRH complexes were more potent than the peptide hormone itself and promoted the FSH release in the ovariectomized, estradiol, and progesterone pretreated rats.

L3 ANSWER 16 OF 37 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
ACCESSION NUMBER: 1991:76164 BIOSIS
DOCUMENT NUMBER: PREV199191044824; BA91:44824
TITLE: SECRETED METALLOPROTEINASES IN TESTICULAR CELL CULTURE.
AUTHOR(S): SANG Q-X [Reprint author]; DYM M; BYERS S W
CORPORATE SOURCE: DEP ANAT CELL BIOL, GEORGETOWN UNIV MED CENT, 3900 RESERVOIR RD, WASHINGTON, DC 20007, USA
SOURCE: Biology of Reproduction, (1990) Vol. 43, No. 6, pp. 946-955.
CODEN: BIREBV. ISSN: 0006-3363.
DOCUMENT TYPE: Article

FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 29 Jan 1991
Last Updated on STN: 30 Jan 1991

AB It is well known that cultured Sertoli cells secrete plasminogen activators (Lacroix ex al, Mol Cell Endocrinol 1977; 9;277-236; Hettle et al. Biol Reprod 1986; 34:895-904). We now show that testicular cells in culture also secrete gelatinolytic metalloproteinases. Gelatin zymographic analysis of concentrated culture medium proteins reveals that Sertoli cells secrete gelatinases of 185 kDa, 110 kDa, 83 kDa, 76 kDa, and 72 kDa in addition to plasminogen activators (PAs). Gelatinase 185 kDa is induced by FSH. Media from Sertoli (epithelial)/peritubular (mesenchymal) cell cocultures contain the Sertoli cell gelatinases and one FSH-stimulated gelatinase of 50 kDa, indicating that gelatinase 50 kDa is regulated by both FSH and cell-cell interactions. A 50 kDa fibronectinolytic activity is also present in the coculture medium from cells grown in the presence of FSH. Casein zymography demonstrates a prominent 30-kDa protease only in media from cocultures. Peritubular cells secrete urokinase-type plasminogen activator (u-PA) and exhibit slightly degrading activity at 86 kDa and 74 kDa. The gelatinases are most active in the pH range 7.3-8.5 and are completely or partially inhibited by metal ion chelators indicating that they are metalloproteinases. Our data demonstrate that testicular cells in culture secrete several gelatinases in addition to PAs, and that FSH and coculture conditions regulate some of these secreted proteases. We suggest that the highly secretion of these proteases may well by of physiological importance during testicular development and spermatogenesis.

L3 ANSWER 17 OF 37 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN
ACCESSION NUMBER: 1987:294116 BIOSIS
DOCUMENT NUMBER: PREV198784024148; BA84:24148
TITLE: SPECIFIC BINDING SITES FOR LH-CHORIONIC GONADOTROPIN LOW-DENSITY LIPOPROTEIN PROLACTIN AND FSH IN HOMOGENATES OF HUMAN CORPUS LUTEUM I. VALIDATION OF METHODS.
AUTHOR(S): BRAMLEY T A [Reprint author]; STIRLING D; SWANSTON I A; MENZIES G S; BAIRD D T
CORPORATE SOURCE: DEP OBSTET GYNAECOL, CENT REPRODUCTIVE BIOL, 37 CHALMERS ST, EDINBURGH EH3 9EW, UK
SOURCE: Journal of Endocrinology, (1987) Vol. 113, No. 2, pp. 305-316.
CODEN: JOENAK. ISSN: 0022-0795.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 6 Jul 1987
Last Updated on STN: 6 Jul 1987

AB The specific binding of 125I-labelled human chorionic gonadotrophin (hCG), human low-density lipoprotein (hLDL), human FSH (hFSH) and human prolactin (hPRL) to homogenates of human corpus luteum tissue was measured. Specific binding of 125I-labelled hCG was dependent on the temperature and duration of incubation, was inhibited by divalent metal ions or chelating agents, and increased linearly with homogenate concentration. Recovery of bound hormone was more effective using Millipore filtration or polyethylene glycol precipitation compared with centrifugation alone. Binding of 125I-labelled hCG was inhibited specifically by low levels of hCG and human LH (hLH) but not by ovine LH or bovine LH. Incubation of human luteal tissue with ice-cold citrate buffer (pH 3) released more than 90% of specifically bound 125I-labelled hCG within 5 min. This treatment inactivated LH receptors,

but did not affect the immunoactivity of hLH released, enabling the measurement of released hormone by radioimmunoassay. Scatchard plots of binding of 125I-labelled LDL to human corpus luteum demonstrated a single class of binding sites. Binding was saturable, increased linearly with increasing concentration of homogenate, and was displaceable by low concentrations of unlabelled LDL. Binding of 125I-labelled hPRL to human luteal homogenates was increased by Mg2+ and was specific for lactogenic hormones (human prolactin, human growth hormone and ovine prolactin). Binding of 125I-labelled hFSH was not dependent on divalent metal ion concentration (in marked contrast to hFSH binding to immature pig granulosa cell receptors) and was displaced by hFSH preparations but not by hPRL, ovine LH or hCG at 1 μg/ml. These results establish optimal conditions and hormone specificities for the measurement of human luteal gonadotrophin and LDL receptors, and methods for the estimation of hLH/hCG endogenously bound to human corpus luteum tissue.

=> dis ibib abs l5 1-17

L5 ANSWER 1 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2007:423215 CAPLUS
DOCUMENT NUMBER: 147:44495
TITLE: Synthesis, structure, network and thermal analysis of four 5-(pyrazinyl)tetrazolato copper(II) and cobalt(II) complexes
AUTHOR(S): Abu-Youssef, Morsy A. M.; Mautner, Franz A.; Massoud, Alshima'a A.; Oehrstroem, Lars
CORPORATE SOURCE: Department of Chemistry, Faculty of Science, Alexandria University, Alexandria, 21321, Egypt
SOURCE: Polyhedron (2007), 26(7), 1531-1540
CODEN: PLYHDE; ISSN: 0277-5387
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 147:44495
AB Three new Cu complexes and one Co complex with 5-(pyrazinyl)tetrazolate anion, (pyztz)-, as chelating bidentate ligand, were obtained by the reaction of pyrazinecarbonitrile with sodium azide in the presence of Cu(II) nitrate or Co(II) chloride. [Cu(pyztz)2(H2O)] (1) deep blue crystals, [Cu(pyztz)2(H2O)2] (2a) green crystals, [Co(pyztz)2(H2O)2] (2b) orange crystals, [Cu(pyztz)2(H2O)2]•(H2O) (3) blue crystals were obtained. The single crystal x-ray diffraction revealed that complex 1 has square pyramidal structure with one H2O mol. at apical and two pyrazine-tetrazolato ligands at basal sites, while structures of 2a, 2b and 3 consist of octahedrally coordinated metal ions, where two pyztz anions act as bidentate ligands via one of the pyrazine-N atoms and one of the tetrazole-N atoms in trans-positions and two trans H2O mols. Complex 3 contains one extra lattice H2O mol. H bonds O-H...O and O-H...N connect the mononuclear units to a three-dimensional network structure in 2 (a and b are isostructural) and 3. Although the H-bond patterns look complex they can be related to the known three- and six-connected rutile net (rtl) in 2 and the four- and six-connected fsh-net in 3.
REFERENCE COUNT: 63 THERE ARE 63 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:612336 CAPLUS
DOCUMENT NUMBER: 143:131925
TITLE: Method for purifying FSH using chromatography
INVENTOR(S): Rossi, Mara

PATENT ASSIGNEE(S): Ares Trading S. A., Switz.
SOURCE: PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005063811	A1	20050714	WO 2004-EP14347	20041216
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004309040	A1	20050714	AU 2004-309040	20041216
CA 2544333	A1	20050714	CA 2004-2544333	20041216
EP 1697412	A1	20060906	EP 2004-803960	20041216
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU				
CN 1890265	A	20070103	CN 2004-80036591	20041216
BR 2004017992	A	20070427	BR 2004-17992	20041216
JP 2008500273	T	20080110	JP 2006-546007	20041216
MX 2006005584	A	20060725	MX 2006-5584	20060517
KR 2006135656	A	20061229	KR 2006-711610	20060613
US 20070129295	A1	20070607	US 2007-581172	20070206

PRIORITY APPLN. INFO.:		EP 2003-104925	A	20031222
		WO 2004-EP14347	W	20041216

AB The invention provides a method for purifying recombinant human FSH or an FSH variant, comprising the steps: (1) ion exchange chromatog.; (2) immobilized metal ion chromatog.; (3) hydrophobic interaction chromatog. which may be carried out in any order.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:451241 CAPLUS
DOCUMENT NUMBER: 143:3755
TITLE: A reagent system and method for modifying the luminescence of lanthanide(III) macrocyclic complexes
INVENTOR(S): Leif, Robert C.; Yang, Sean; Vallarino, Lidia
PATENT ASSIGNEE(S): Newport Instruments, USA
SOURCE: PCT Int. Appl., 165 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005046735	A1	20050526	WO 2004-US37314	20041108
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,				

CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO,
SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
NE, SN, TD, TG

CA 2545066	A1	20050526	CA 2004-2545066		20041108
EP 1684808	A1	20060802	EP 2004-818664		20041108
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS					
US 20070134160	A1	20070614	US 2006-578355		20060612
PRIORITY APPLN. INFO.:			US 2003-518605P	P	20031107
			WO 2004-US37314	W	20041108

OTHER SOURCE(S): MARPAT 143:3755

AB Disclosed is a spectrofluorimetrically detectable luminescent composition consisting essentially of at least one energy transfer acceptor lanthanide(III) complex having an emission spectrum maximum in the range from 300 to 2000 nm and a luminescence-enhancing amount of at least one energy transfer donor selected from the group consisting of a fluorophore, a lumiphore, an organic compound, a salt of an organic ion, a metal ion, a metal ion complex, or a combination thereof. Such energy transfer donor enhances the luminescence of at least one energy transfer acceptor lanthanide(III) complex, with the conditions that the emission spectrum of any energy transfer donor differs from that of its energy transfer acceptor lanthanide(III) complex; and such energy transfer donor can be dissolved to form a unitary solution in a solvent having an evaporation rate at least as great as that of water.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:1004336 CAPLUS
DOCUMENT NUMBER: 143:301122
TITLE: Novel peptides derived from C-terminal acidic tail of synuclein conferring environmental stress resistance and fusion proteins containing them with improved stabilities
INVENTOR(S): Kim, Jong-sun
PATENT ASSIGNEE(S): Atgen Co., Ltd., S. Korea
SOURCE: U.S. Pat. Appl. Publ., 100 pp., Cont.-in-part of U.S. Ser. No. 713,851.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050203010	A1	20050915	US 2005-908400	20050510
US 20050187378	A1	20050825	US 2003-713851	20031114
US 7060464	B2	20060613		
KR 450133	B1	20040924	KR 2004-33123	20040511
WO 2005108423	A1	20051117	WO 2005-KR1364	20050510
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG,				

NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

US 2003-713851	A2 20031114
KR 2004-33123	A 20040511
KR 2005-36882	A 20050502
KR 2001-72486	A 20011120
US 2002-223978	A3 20020820

AB The present invention relates to a peptide (10-50 amino acids) capable of conferring resistance to environmental stresses, which is derived from the C-terminal acidic tail of synuclein (ATS), or its derivative, and to a fusion protein comprising the peptide, wherein the fusion protein is resistant to environmental stresses. Also, the present invention is concerned with a method of conferring resistance to environmental stress to a protein of interest, comprising linking the protein to the peptide. While maintaining the intrinsic properties of the fusion partner protein, the fusion protein is resistant to environmental stresses, including heat, pH, metal ions, repeated freezing/thawing and high-concentration of polypeptide. In particular embodiments, fusion proteins containing various length ATSs from either α-synuclein, or β-synuclein, or γ-synuclein and a target protein of interest, such as GST, DHFR, hGH, GCSF, and hLeptin, are prepared and demonstrated to have improved stabilities against environmental stress such as heat, stirring, freezing/thawing, etc. In addition, the peptide fragment derivative of the C-terminal acidic tail of α-Synuclein (Syn-119-140), containing one or two substituted mutations at the residues not conserved among the synuclein family, such as E123A, Y133A, A124E, N122V, M127S and A140S, are shown to have similar activity as the wild-type peptide.

L5 ANSWER 5 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER:	2004:751315 CAPLUS
DOCUMENT NUMBER:	141:343681
TITLE:	The effects of a new phenanthroline Cu++ complex derivative on concentration of testosterone and contraception effects in adult male Balb/C mice strain
AUTHOR(S):	Shariati, M.; Parivar, K.; Oryan, Sh.; Shocravi, A.; Alizadeh, R.
CORPORATE SOURCE:	Department of Biology, School of Basic Sciences, Azad University, Iran
SOURCE:	Majallah-i Ilmi Danishgah-i Ulum-i Pizishki va Khadamat-i Bihdashti Darmani-i Hamadan (2004), 11(1), 10-14, 65 CODEN: MIDUAR; ISSN: 1025-4285
PUBLISHER:	Hamadan University of Medical Sciences & Health Services
DOCUMENT TYPE:	Journal
LANGUAGE:	Persian

AB Phananthrolines are a group of organic compds. which can transfer metal ions through the plasma membranes of the cell. Due to their ionophoric characteristics, phenanthrolines are widely used in chemical and biol. studies. In this research, the effect a new chelating agent 2,6-diaminopyridinum(1,10-phenanthroline-2,9-dicarboxylate) which was synthesized in organic chemical laboratory of Teacher Training University of Tehran city, on the pituitary - gonad axis was studied. It was decided to find out the effects of this compound on the pituitary-gonad axis and testis tissue of adult Balb/C mice. LD50 standard was found 35mg/kg B.W. Some doses

of 15, 20 and 25 mg/kg of body weight were injected as sublethal doses of compound and continued for 20 days i.p., while the control groups received the solvent (normal saline). The results showed that 25 mg/kg B.W. of the compound decreases testosterone level in the blood serum significantly (68.5%) but no significant changes were obtained in LH and FSH levels in exptl. and control groups. Also, low doses of 15 and 20 mg/kg B.W. did not change the hormonal levels significantly. Histol. investigations on the testis tissue showed that the number of sperm cells in doses of 15, 20 and 25 mg/kg B.W. decreased 20.2%, 52.1% and 95.2% and did not show any harmful side effects on the animals.

L5 ANSWER 6 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:507951 CAPLUS
DOCUMENT NUMBER: 135:87148
TITLE: Metal ion binding site-based method of identifying ligands of biological target molecules for drug discovery
INVENTOR(S): Elling, Christian E.; Gerlach, Lars Ole; Holst Lange, Birgitte; Pedersen, Jan Torleif; Schwartz, Thue W.
PATENT ASSIGNEE(S): 7TM Pharma, Den.
SOURCE: PCT Int. Appl., 114 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001050127	A2	20010712	WO 2000-EP13389	20001229
WO 2001050127	A3	20020131		
WO 2001050127	A9	20020912		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2395999	A1	20010712	CA 2000-2395999	20001229
US 20020061599	A1	20020523	US 2000-752102	20001229
EP 1242824	A2	20020925	EP 2000-993741	20001229
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
WO 2002054077	A2	20020711	WO 2001-DK867	20011221
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002215888	A1	20020716	AU 2002-215888	20011221
PRIORITY APPLN. INFO.:			DK 1999-1879	A 19991230
			DK 1999-1880	A 19991230
			US 2000-175401P	P 20000111
			US 2000-175994P	P 20000111

DK 2000-705	A	20000428
US 2000-202990P	P	20000509
WO 2000-EP13389	W	20001229
DK 2001-536	A	20010330
US 2001-280237P	P	20010330
WO 2001-DK867	W	20011221

OTHER SOURCE(S): MARPAT 135:87148

AB The invention provides a mol. approach for rapidly and selectively identifying small organic mol. ligands, i.e. compds., that are capable of interacting with and binding to specific sites on biol. target mols. The methods of the invention are applicable to any biol. target mol. that has or can be manipulated to have a metal-ion binding site. Biol. target mols. are e.g. proteins, polypeptides, oligopeptides, nucleic acids, carbohydrates, nucleoproteins, glycoproteins, glycolipids, lipoproteins and derivs. thereof. More specifically, the biol. target mols. include membrane receptors, signal transduction proteins, scaffolding proteins, nuclear receptors, steroid receptors, intracellular receptors, transcription factors, enzymes, allosteric enzyme regulatory proteins, growth factors, hormones, neuropeptides and Igs. A very interesting group of biol. target mols. are membrane proteins such as, e.g., transmembrane protein (e.g. 7 TMs). The methods described herein make it possible to construct and screen libraries of compds. specifically directed against predetd. epitopes on the biol. target mols. The compds. are initially constructed to be bifunctional, i.e. having both a metal-ion binding moiety, which conveys them with the ability to bind to either a natural or an artificially constructed metal-ion binding site as well as a variable moiety, which is varied chemical to probe for interactions with specific parts of the biol. target mol. located spatially adjacent to the metal-ion binding site. Compds. may subsequently be further modified to bind to the unmodified biol. target mol. without help of the bridging metal-ion. The methods according to the invention may be performed easily and quickly and lead to unambiguous results. The compds. identified by the methods may themselves be employed for various applications or may be further derivatized or modified to provide novel compds. The methodol. of the invention is useful in drug discovery.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 7 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1998:765229 CAPLUS

DOCUMENT NUMBER: 130:20706

TITLE: Isolation method for dog pituitary glycoprotein hormones which preserves isoelectric components

AUTHOR(S): Chiba, K.; Kobayashi, H.; Wakabayashi, K.

CORPORATE SOURCE: Inst. Molecular Cellular Regulation, Gunma Univ., Maibashi, Japan

SOURCE: Advances in Comparative Endocrinology, Proceedings of the International Congress of Comparative Endocrinology, 13th, Yokohama, Nov. 16-21, 1997 (1997) , Volume 1, 867-871. Editor(s): Kawashima, Seiichiro; Kikuyama, Sakae. Monduzzi Editore: Bologna, Italy. CODEN: 66ZWA3

DOCUMENT TYPE: Conference

LANGUAGE: English

AB A new preparative procedure without using ion-exchanger has been developed for the efficient purification of canine LH (cLH), cFSH, and cTSH from the pituitary gland. The hormones were separated by Con A-, hydrophobic interaction-, then immobilized metal ion affinity chromatog. High purity of cLH, cFSH, and cTSH was indicated as single bands in SDS-PAGE with apparent mol. masses of 34, 36, and 37 kDa, resp. The purified cLH, cFSH, and cTSH showed two bands corresponding to α

(20 kDa) and β subunits (16, 22, and 16 kDa, resp.) under reducing condition in SDS-PAGE. The purified hormones were prepared in good recovery (36-53%) with high biol. activity or binding activity to the receptor. Examination of the hormone fraction with isoelec. focusing showed that the heterogeneity of these hormones were well preserved after the purification step of Con A. RIA systems of these hormones were also established.
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 8 OF 17 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 1997372215 MEDLINE
DOCUMENT NUMBER: PubMed ID: 9228455
TITLE: Isolation and partial characterization of LH, FSH and TSH from canine pituitary gland.
AUTHOR: Chiba K; Kobayashi H; Wakabayashi K
CORPORATE SOURCE: Biosignal Research Center, Gunma University, Japan.
SOURCE: Endocrine journal, (1997 Apr) Vol. 44, No. 2, pp. 205-18. Journal code: 9313485. ISSN: 0918-8959.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199708
ENTRY DATE: Entered STN: 2 Sep 1997
Last Updated on STN: 2 Sep 1997
Entered Medline: 18 Aug 1997
AB A new preparative procedure without using ion-exchanger is described for the efficient purification of canine LH (cLH), FSH (cFSH) and TSH (cTSH) from the pituitary gland. The hormones were extracted from the pituitary homogenate with an ammonium sulfate solution, and were separated by Concanavalin (Con) A affinity-, hydrophobic interaction-, then immobilized metal ion affinity chromatography. In the immobilized metal ion affinity chromatography, we used copper (Cu2+) as chelated metal ion with ammonium ion gradient and pH gradient in phosphate buffer to attain separation of the hormones. High purity of cLH, cFSH and cTSH was indicated as single bands in SDS-PAGE, with apparent molecular masses of 34, 36 and 37 kDA, respectively. The purified hormones showed two bands corresponding to alpha (20 kDa) and beta subunits (cLH beta: 16 kDa, cFSH beta: 22 kDa, cTSH beta: 16 kDa) under reducing condition in SDS-PAGE. The purified hormones were prepared in good recovery (LH: 53%, FSH: 34%, TSH: 36%) with high biological activity or binding activity to the receptor. Cross-contamination of the purified hormone was less than 0.5%. Examination of the hormone fraction with isoelectric focusing showed that major peaks of isoelectric isoforms were maintained throughout the purification steps of cLH and cFSH, while a few peaks were lost in Con A affinity chromatography in cTSH purification. It was concluded that the present method could prepare highly purified cLH, cFSH and cTSH which retained isoforms of the hormones and biological activity or binding affinity to the receptor.

L5 ANSWER 9 OF 17 EMBASE COPYRIGHT (c) 2009 Elsevier B.V. All rights reserved on STN DUPLICATE 2
ACCESSION NUMBER: 1993051113 EMBASE
TITLE: [Influence of zinc concentration on the constitution and some properties of folitropine suspensions]. EINFLUSS DER ZINKIONENKONZENTRATION AUF BILDUNG UND EINIGE EIGENSCHAFTEN VON FOLITROPIN-SUSPENSIONEN.
AUTHOR: Ryszka, F. (correspondence); Dolinska, B.; Smorag, Z.
CORPORATE SOURCE: Department of Applied Pharmacy and, Drug Technology, Katowice, Poland.
SOURCE: Pharmazie, (1993) Vol. 48, No. 1, pp. 46-47.

ISSN: 0031-7144 CODEN: PHARAT
COUNTRY: Germany
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 037 Drug Literature Index
LANGUAGE: German
SUMMARY LANGUAGE: English; German
ENTRY DATE: Entered STN: 14 Mar 1993
Last Updated on STN: 14 Mar 1993

AB The influence of zinc concentration on the constitution of folitropine (FSH)-zinc complexes is studied. The complexes are small soluble within the molar ratio hormone: metal ion between 1:10 and 1:100. The suspensions received are characterised by sedimentation time, redispersion time, particle diameter and the amount of free and bound FSH. The liberation of FSH in vitro is delayed and the effect on the ovulation at rabbits is stronger as the effect of unbound FSH in control experiments.

L5 ANSWER 10 OF 17 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 1992407540 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1527528
TITLE: Increased LH and FSH release from the anterior pituitary of ovariectomized rat, in vivo, by copper-, nickel-, and zinc-LHRH complexes.
AUTHOR: Kochman K; Gajewska A; Kozlowski H; Masiukiewicz E; Rzeszotarska B
CORPORATE SOURCE: Institute of Animal Physiology and Nutrition, Polish Academy of Sciences, Jablonna.
SOURCE: Journal of inorganic biochemistry, (1992 Oct 1) Vol. 48, No. 1, pp. 41-6.
Journal code: 7905788. ISSN: 0162-0134.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199210
ENTRY DATE: Entered STN: 6 Nov 1992
Last Updated on STN: 3 Feb 1997
Entered Medline: 22 Oct 1992

AB The effect of Cu2+, Ni2+, Zn2+ and their complexes with LHRH on the release of luteinizing hormone (LH) and follicle stimulating hormone (FSH) was estimated in in vivo experiments with the use of the method proposed by Ramirez and McCann. Ovariectomized, estradiol, and progesterone pretreated rats were injected intravenously either with LHRH alone, a metal ion alone, a mixture of metal and hormone, or a metal-LHRH complex. A metal alone or a mixture of it with LHRH did not affect gonadotropin release at all or no more than LHRH alone. However, the complex of Cu2+ with LHRH brought about a high release of LH and even higher release of FSH. This indicates that copper complex is more effective than metal-free LHRH. The nickel complex showed a similar although lesser effect. The zinc complex had similar potency to free LHRH though higher FSH-releasing ability was noticed. We conclude that copper-, nickel-, and zinc-LHRH complexes were more potent than the peptide hormone itself and promoted the FSH release in the ovariectomized, estradiol, and progesterone pretreated rats.

L5 ANSWER 11 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1992:546710 CAPLUS
DOCUMENT NUMBER: 117:146710
ORIGINAL REFERENCE NO.: 117:25345a,25348a
TITLE: Process using phosvitin for the chromatographic

separation of proteins or polypeptides or removal of metals from biological materials
INVENTOR(S): Ramadoss, Candadai S.; Lakhey, Hiten V.; Krishnaswamy, Patnam R.
PATENT ASSIGNEE(S): India
SOURCE: Can. Pat. Appl., 42 pp.
CODEN: CPXXEB
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 2044717	A1	19911219	CA 1991-2044717	19910617
IN 177752	A1	19970215	IN 1990-MA480	19900618
AU 9179115	A	19911219	AU 1991-79115	19910618
AU 653941	B2	19941020		
GB 2248839	A	19920422	GB 1991-13096	19910618
GB 2248839	B	19950301		
EP 475779	A1	19920318	EP 1991-308382	19910913
R: DE, DK, FR, NL, SE				
US 5665868	A	19970909	US 1991-759030	19910913
JP 06079172	A	19940322	JP 1991-281243	19911028

PRIORITY APPLN. INFO.: IN 1990-MA480 A 19900618
GB 1990-20098 A 19900914
CA 1991-2044717 A 19910617

AB Phosvitin (I) or a modified I immobilized and coupled to a suitable matrix may be used for the separation and purification of proteins or polypeptides and in the removal of metal ions from biol. material. If desired, the (modified) I may be in the form of a metal chelate complex. I was purified from hen egg yolks and coupled to CNBr-activated Sepharose. A I-Sepharose 4B column was used to purify lysozyme from egg white. Preparation and use of a trypsin-modified I is also described.

L5 ANSWER 12 OF 17 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 1991152195 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2127232
TITLE: Secreted metalloproteinases in testicular cell culture.
AUTHOR: Sang Q X; Dym M; Byers S W
CORPORATE SOURCE: Department of Anatomy and Cell Biology, Georgetown University Medical Center, Washington, District of Columbia 20007.
CONTRACT NUMBER: HD 16260 (United States NICHD NIH HHS)
HD 23744 (United States NICHD NIH HHS)
SOURCE: Biology of reproduction, (1990 Dec) Vol. 43, No. 6, pp. 946-55.
Journal code: 0207224. ISSN: 0006-3363.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
(RESEARCH SUPPORT, U.S. GOV'T, P.H.S.)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199104
ENTRY DATE: Entered STN: 28 Apr 1991
Last Updated on STN: 3 Mar 2000
Entered Medline: 11 Apr 1991

AB It is well known that cultured Sertoli cells secrete plasminogen activators (Lacroix et al., Mol Cell Endocrinol 1977; 9:227-236; Hettle et al., Biol Reprod 1986; 34:895-904). We now show that testicular cells in

culture also secrete gelatinolytic metalloproteinases. Gelatin zymographic analysis of concentrated culture medium proteins reveals that Sertoli cells secrete gelatinases of 185 kDa, 110 kDa, 83 kDa, 76 kDa, and 72 kDa in addition to plasminogen activators (PAs). Gelatinase 185 kDa is induced by FSH. Media from Sertoli (epithelial)/peritubular (mesenchymal) cell cocultures contain the Sertoli cell gelatinases and one FSH-stimulated gelatinase of 50 kDa, indicating that gelatinase 50 kDa is regulated by both FSH and cell-cell interactions. A 50-kDa fibronectinolytic activity is also present in the coculture medium from cells grown in the presence of FSH. Casein zymography demonstrates a prominent 30-kDa protease only in media from cocultures. Peritubular cells secrete urokinase-type plasminogen activator (u-PA) and exhibit slight degrading activity at 86 kDa and 74 kDa. The gelatinases are most active in the pH range 7.3-8.5 and are completely or partially inhibited by metal ion chelators indicating that they are metalloproteinases. Our data demonstrate that testicular cells in culture secrete several gelatinases in addition to PAs, and that FSH and coculture conditions regulate some of these secreted proteases. We suggest that the highly regulated secretion of these proteases may well be of physiological importance during testicular development and spermatogenesis.

L5 ANSWER 13 OF 17 MEDLINE on STN DUPLICATE 5
ACCESSION NUMBER: 1987224696 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3108440
TITLE: Specific binding sites for LH/chorionic gonadotrophin, low-density lipoprotein, prolactin and FSH in homogenates of human corpus luteum. I: Validation of methods.
AUTHOR: Bramley T A; Stirling D; Swanston I A; Menzies G S; Baird D T
SOURCE: The Journal of endocrinology, (1987 May) Vol. 113, No. 2, pp. 305-15.
Journal code: 0375363. ISSN: 0022-0795.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
(RESEARCH SUPPORT, NON-U.S. GOV'T)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198707
ENTRY DATE: Entered STN: 5 Mar 1990
Last Updated on STN: 5 Mar 1990
Entered Medline: 20 Jul 1987

AB The specific binding of 125I-labelled human chorionic gonadotrophin (hCG), human low-density lipoprotein (hLDL), human FSH (hFSH) and human prolactin (hPRL) to homogenates of human corpus luteum tissue was measured. Specific binding of 125I-labelled hCG was dependent on the temperature and duration of incubation, was inhibited by divalent metal ions or chelating agents, and increased linearly with homogenate concentration. Recovery of bound hormone was more effective using Millipore filtration or polyethylene glycol precipitation compared with centrifugation alone. Binding of 125I-labelled hCG was inhibited specifically by low levels of hCG and human LH (hLH) but not by ovine LH or bovine LH. Incubation of human luteal tissue with ice-cold citrate buffer (pH 3) released more than 90% of specifically bound 125I-labelled hCG within 5 min. This treatment inactivated LH receptors, but did not affect the immunoactivity of hLH released, enabling the measurement of released hormone by radioimmunoassay. Scatchard plots of binding of 125I-labelled LDL to human corpus luteum demonstrated a single class of binding sites. Binding was saturable, increased linearly with increasing concentration of homogenate, and was displaceable by low concentrations of unlabelled LDL. Binding of 125I-labelled hPRL to human

luteal homogenates was increased by Mg2+ and was specific for lactogenic hormones (human prolactin, human growth hormone and ovine prolactin). Binding of 125I-labelled hFSH was not dependent on divalent metal ion concentration (in marked contrast to hFSH binding to immature pig granulosa cell receptors) and was displaced by hFSH preparations but not by hPRL, ovine LH or hCG at 1 microgram/ml. These results establish optimal conditions and hormone specificities for the measurement of human luteal gonadotrophin and LDL receptors, and methods for the estimation of hLH/hCG endogenously bound to human corpus luteum tissue.

L5 ANSWER 14 OF 17 MEDLINE on STN DUPLICATE 6
ACCESSION NUMBER: 1987004363 MEDLINE
DOCUMENT NUMBER: PubMed ID: 3093204
TITLE: Rat ovarian and adrenal prolactin receptors. Sizes and effects of divalent metal ions.
AUTHOR: Ohta S; Wakabayashi K
SOURCE: Endocrinologia japonica, (1986 Apr) Vol. 33, No. 2, pp. 239-49.
Journal code: 0376546. ISSN: 0013-7219.
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198611
ENTRY DATE: Entered STN: 2 Mar 1990
Last Updated on STN: 3 Feb 1997
Entered Medline: 14 Nov 1986
AB Receptor fractions were prepared from follicle-rich ovaries (for FSH), luteal cell-rich ovaries (for LH and PRL), and adrenals (for PRL) of rats. Divalent metal ions, Mg++, Ca++, and Mn++ showed inhibitory effects on the binding of LH and FSH to their receptors. The binding of the former was more sensitive to these ions than the latter. On the other hand they showed bell-shaped promotive effects on PRL-ovarian receptor binding, the maximal effects being observed at 10-20 mM. Besides these ions, Ba++ also had a promotive effect, while other divalent metal ions such as Zn++, Cd++, Ni++, and Co++ showed inhibitory effects on PRL-ovarian receptor binding at 5 mM. Mg++ and Ca++ also promoted PRL-adrenal receptor binding, while Mn++ promoted the binding at 10 mM but inhibited it at higher concentrations. Association constant (Ka) and binding capacity (Bmax) of PRL receptors of the ovary and the adrenal were significantly different (ovary: Ka = 0.69 X 10(10) M-1, Bmax = 62 fmol/mg protein, adrenal: Ka = 0.21 X 10(10) M-1, Bmax = 99 fmol/mg protein). Ka of the ovarian PRL receptor was not influenced by these divalent ions, while that of the adrenal receptor was doubled by Ca and Mn ions, Bmax of the latter was also increased. A cooperative effect of Mg and Ca ions was observed on Ka and Bmax of the adrenal receptor. The sizes of the PRL binding sites of these organs revealed by affinity labelling were 17K and 40K in the ovary, and 40K and 110K in the adrenal. These results indicate the different properties of receptors in these different target organs.

L5 ANSWER 15 OF 17 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on STN DUPLICATE 7
ACCESSION NUMBER: 1986:440962 BIOSIS
DOCUMENT NUMBER: PREV198682107150; BA82:107150
TITLE: ACID PHOSPHATASES IN GERMINAL AND SOMATIC CELLS OF THE TESTES.
AUTHOR(S): VANHA-PERTTULA T [Reprint author]; MATHER J P; BARDIN C W; MOSS S B; BELLVE A R
CORPORATE SOURCE: DEP ANATOMY, UNIV KUOPIO, POB 6, 70211, KUOPIO, FINLAND
SOURCE: Biology of Reproduction, (1986) Vol. 35, No. 1, pp. 1-9.
CODEN: BIREBV. ISSN: 0006-3363.

DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 8 Nov 1986
Last Updated on STN: 8 Nov 1986

AB Four forms of acid phosphatase have been found in the testicular tissue of many mammalian species, but their exact cellular site has remained obscure. In this work acid phosphatases have been studied in different reproductive organs of the male rat, in somatic cell lines derived by cloning from both rat and mouse testes, in primary cultures of rat Sertoli cells, and in isolated spermatogenic cells of the mouse. Among the reproductive organs, preputial glands show the highest specific activities with p-nitrophenyl phosphate as substrate, followed by he testiclar tissue and the different regions of the epididymis. By contrast to that in other tissues, testicular activity with p-nitrophenyl phosphate is not influenced by tartrate and is activated markedly by cobalt (Co2+). Among the somatic cell lines, the highest hydrolysis rates are obtained with naphthyl substrates in the epithelial (TR-1) and myoid (TR-M) cell lines and marginally lower rates in the Leydig (TM3) and Sertoli (TM4) cell lines. With thymolphthalein phosphate, the latter two cell lines show very low activity. These activities are not influenced by different hormones and growth factors in the culture medium. The most marked Co2+-activated reaction with p-nitrophenyl phosphate is found in advanced stages of germinal cells and residual bodies. Primary cultures of Sertoli cells, prepared from rats 10 to 30 days of age, show a slight decrease in acid phosphatase levels; however, the activities are not influenced markedly by addition of follicle-stimulating hormone (FSH) and/or testosterone to the culture medium. Chromatofocusing of somatic and germinal cell homogenates resulted in two tartrate-resistant activity peaks (EI, EII), which probably corresponded to lysosomal enzymes, and a double-peak of tartrate-sensitive activity (EIII). The epithelial and myoid cells lines also have a minor tartrate-resistant activity (EV) with a low isoelectric point (pI). The germinal cells and residual bodies as well as the Sertoli cell line each have a separate tartrate-resistant enzyme (EIV) that is activated markedly by CO2+ and several other divalent metal ions (Mg2+,Mn2+,Ni2+,Zn2+). It is concluded that the latter enzyme may have a special function in processing the structures of germinal cells before and after spermiation, while other, (EI-EIII, EV) are obviously more widely distributed forms of acid phosphatase.

L5 ANSWER 16 OF 17 EMBASE DUPLICATE 8
ACCESSION NUMBER: 1983037238 EMBASE
TITLE: Follitropin binding to receptors in testis. Modulation by monovalent salts and divalent cations.
AUTHOR: Andersen, T.T.; Reichert Jr., L.E.
CORPORATE SOURCE: Dep. Biochem., Albany Med. Coll., Union Univ., Albany, NY 12208, United States.
SOURCE: Journal of Biological Chemistry, (1982) Vol. 257, No. 19, pp. 11551-11557.
ISSN: 0021-9258 CODEN: JBCHA3
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 028 Urology and Nephrology
029 Clinical and Experimental Biochemistry
003 Endocrinology
030 Clinical and Experimental Pharmacology
037 Drug Literature Index
LANGUAGE: English
ENTRY DATE: Entered STN: 9 Dec 1991
Last Updated on STN: 9 Dec 1991

AB The effects of monovalent salts and divalents metal ions on the interactions of radioiodinated human follitropin ((125)I-hFSH) with membrane-bound, detergent-solubilized, or buffer-soluble receptors from calf testis were studied. Binding of (125)I-hFSH to the membrane-bound receptor was stimulated 2- to 3-fold by Mn(2+), Mg(2+), or Ca(2+) (each at 2-5 mM), but was inhibited by Co(2+) or Ni(2+). Neither of these ions was capable of causing dissociation of preformed hormone receptor complexes. Addition of 10 mM EDTA resulted in a rapid, reversible dissociation of (125)I-hFSH from each class of the receptor. Binding of FSH to detergent-solubilized or buffer-soluble receptor in the absence of divalent ions was negligible and was maximal at approximately 5 mM Mn(2+), or Ca(2+), with a midpoint of 0.8 mM. Various monovalent salts either inhibited or stimulated specific binding of FSH to the three classes of receptor. Inhibition of halides increased with ionic radius, in the order F(-)<Cl(-)<I(-). Among the alkali ions, Na(+) was more inhibitory than Li(+) or K(+) at 0.1 M. Acetate (0.1 M) was noninhibitory, while NO(3)(-) or HCO(3)(-) was a potent inhibitor. Stimulation of (125)I-hFSH binding was seen at 0.1 M NH(4)(+) ion. The effects of the various monovalent salts were primarily on receptor affinity, with the rate of dissociation being affected more than the rate of association. These effects, which are discussed in terms of their relationship to the B coefficient of viscosity, were reversible and nonspecific binding was largely unaffected. The similarity of effects of these salts or cations on the interaction of FSH with receptors in testis membranes, after detergent solubilization, and with FSH binding components soluble in the absence of detergent support the notion that the latter preparations are suitable models for the study of the receptor once removed from its membrane. The results also indicate that a detailed understanding of the effects of common inorganic ions on the interaction of FSH with receptor is essential to proper evaluation of in vitro binding studies.

L5 ANSWER 17 OF 17 EMBASE DUPLICATE 9

ACCESSION NUMBER: 1981238087 EMBASE
TITLE: Changes in FSH and LH secretion in the ferret associated with the induction of ovulation by copper acetate.
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AB The changes in FSH and LH secretion associated with the induction of ovulation by i.v. injection of 5 mg copper acetate were followed in the ferret and found to be influenced by barbiturate anesthesia. In anesthetized estrous animals, the metal ion produced a small initial increase in plasma LH concentration which was followed by a gradual but sustained rise. Anestrous animals responded with a large initial surge of LH release which declined to a plateau some 4 times higher than the basal level and was maintained for at least 6 h. Compared with the anesthetized animals, treatment of conscious estrous ferrets with copper acetate caused an abrupt and much greater

initial increase in plasma LH concentration, while in conscious anestrous ferrets the initial surge in plasma LH content was significantly greater than seen under anesthesia, but was followed by a steady decline toward control values. The changes in plasma FSH concentration produced by copper acetate were somewhat similar to those for LH, but were less pronounced.

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